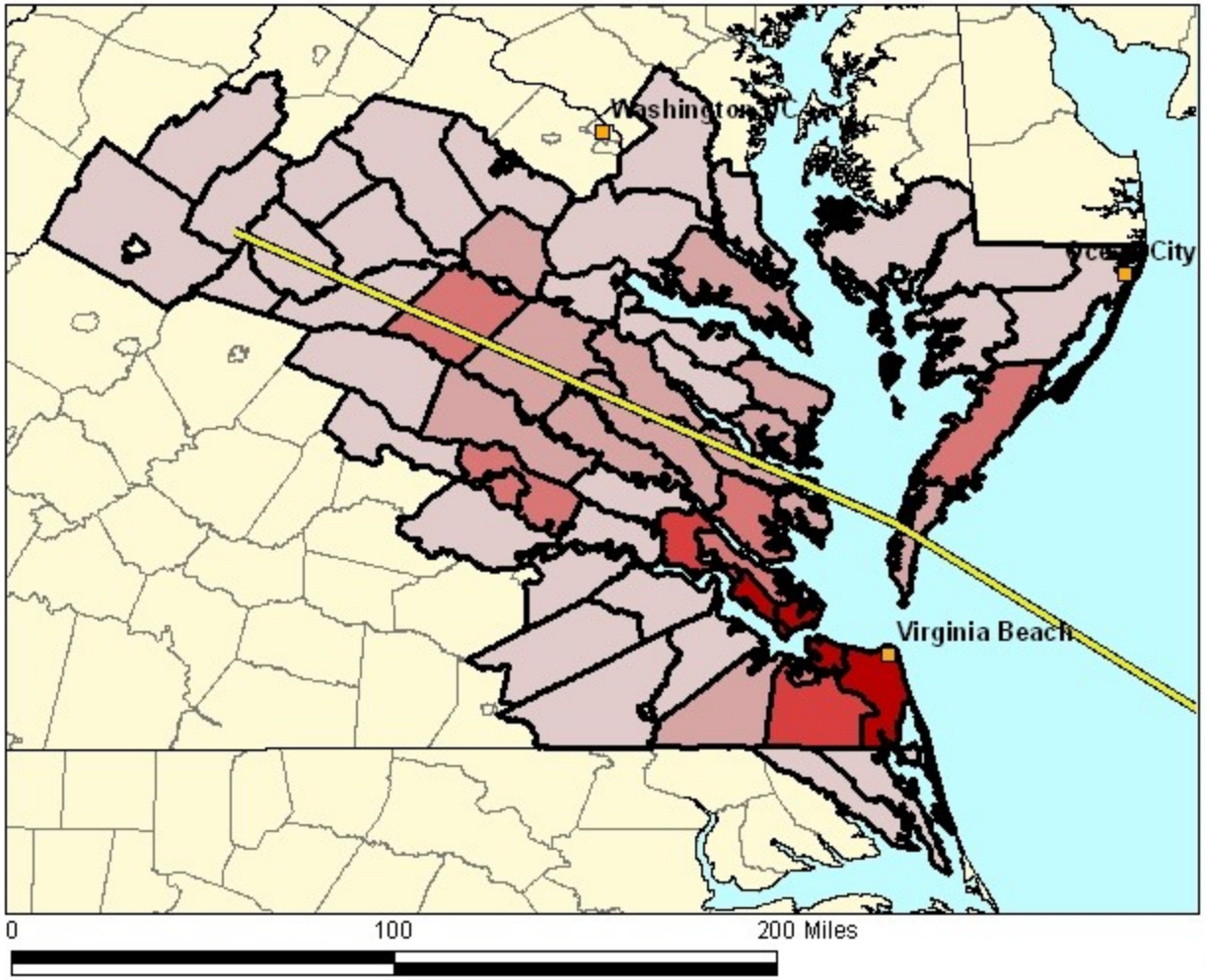
US Army Corps of Engineers

Hurricane Bret 1981 Debris Model

Landfall Plus About 12 Hours

For Official Use Only!



Post Landfall Debris Model Results

Virginia - 15,076,000 Yards
Maryland - 526,000 Yards
North Carolina - 23,000 Yards

Model results per County on following page

This model is based on a Category 3 storm making landfall near coastal Virginia.

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 3 storm making landfall near coastal Virginia. These projections are based on information from the NHC (0930 EDT 09/16/2007) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Debris Model	
Generated By: Siemsen, LRL 1000 EDT 09/16/2007	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 13

US Army Corps of Engineers

Hurricane Bret 1981 Debris Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Yards per State	County	Yards per County
Maryland		Calvert	52,000
		Charles	77,000
		Dorchester	5,000
		Prince Georges	< 1,000
		Somerset	89,000
		St Marys	210,000
		Wicomico	56,000
		Worcester	37,000
Maryland	526,000		
North Carolina		Camden	2,000
		Currituck	21,000
North Carolina	23,000		
Virginia		Accomack	395,000
		Caroline	218,000
		Charles City	21,000
		Chesapeake	534,000
		Chesterfield	61,000
		Colonial Hghts Cty	< 1,000
		Culpeper	40,000
		Essex	136,000
		Fauquier	17,000
		Fredericksburg	59,000
		Gloucester	461,000
		Goochland	6,000
		Greene	2,000
		Hampton City	1,258,000
		Hanover	180,000
		Henrico	419,000
		Hopewell City	35,000

State	Yards per State	County	Yards per County
Virginia		Isle Of Wight	66,000
(continued)		James City	507,000
		King And Queen	120,000
		King George	47,000
		King William	117,000
		Lancaster	223,000
		Louisa	35,000
		Madison	17,000
		Mathews	186,000
		Middlesex	216,000
		New Kent	84,000
		Newport News	1,644,000
		Norfolk City	1,988,000
		Northampton	222,000
		Northumberland	160,000
		Orange	44,000
		Page	21,000
		Poquoson City	92,000
		Portsmouth	334,000
		Prince George	23,000
		Prince William	40,000
		Rappahannock	< 1,000
		Richmond	78,000
		Richmond City	302,000
		Rockingham	2,000
		Shenandoah	2,000
		Southampton	2,000
		Spotsylvania	339,000
		Stafford	169,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane Bret 1981 Debris Model

Generated By:
Siemsen, LRL 1000 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Bret 1981 Debris Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Yards per State	County	Yards per County
Virginia		Suffolk City	106,000
(continued)		Surry	25,000
		Sussex	9,000
		Virginia Beach	3,368,000
		Westmoreland	88,000
		Williamsburg	85,000
		York	473,000
Virginia	15,076,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Debris Model

Generated By:
Siemsen, LRL 1000 EDT 09/16/2007

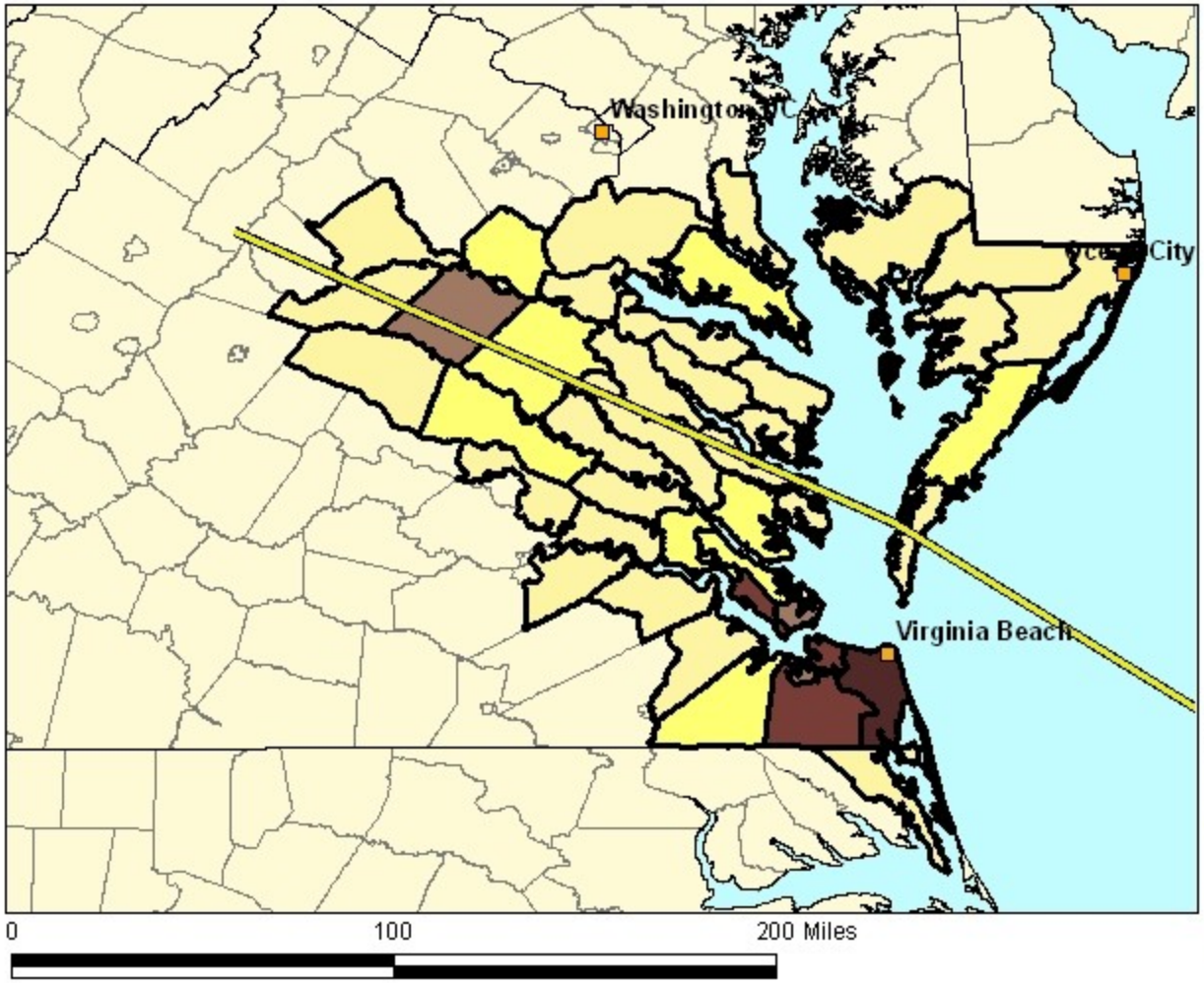
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Bret 1981 Population Model

Landfall Plus About 12 Hours

For Official Use Only!



Post Landfall Population Model Results

Virginia - 2,037,000
Maryland - 93,000
North Carolina - 2,000

Model results per County on following page

This model is based on a Category 3 storm making landfall near coastal Virginia.

Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 3 storm making landfall near coastal Virginia. These projections are based on information from the NHC (0930 EDT 09/16/2007) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Population Model	
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Sources: HURREVAC LRL-DEBRIS	Page 4 of 13

US Army Corps of Engineers

Hurricane Bret 1981 Population Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Population per State	County	Population per County
Maryland		Calvert	2,000
		Charles	2,000
		Dorchester	< 1,000
		Somerset	19,000
		St Marys	62,000
		Wicomico	< 1,000
		Worcester	8,000
Maryland	93,000		
North Carolina		Currituck	2,000
North Carolina	2,000		
Virginia		Accomack	40,000
		Caroline	27,000
		Charles City	6,000
		Chesapeake	210,000
		Culpeper	< 1,000
		Essex	11,000
		Fredericksburg	22,000
		Gloucester	39,000
		Hampton City	146,000
		Hanover	66,000
		Henrico	8,000
		Isle Of Wight	23,000
		James City	60,000
		King And Queen	7,000
		King George	17,000
		King William	16,000
		Lancaster	12,000
		Louisa	4,000
		Mathews	10,000

State	Population per State	County	Population per County
Virginia		Middlesex	11,000
(continued)		New Kent	17,000
		Newport News	179,000
		Norfolk City	229,000
		Northampton	14,000
		Northumberland	13,000
		Orange	9,000
		Poquoson City	12,000
		Portsmouth	102,000
		Prince George	2,000
		Richmond	10,000
		Spotsylvania	119,000
		Stafford	36,000
		Suffolk City	26,000
		Surry	6,000
		Virginia Beach	436,000
		Westmoreland	18,000
		Williamsburg	12,000
		York	62,000
Virginia	2,037,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Population Model

Generated By:
Siemsen, LRL 1000 EDT 09/16/2007

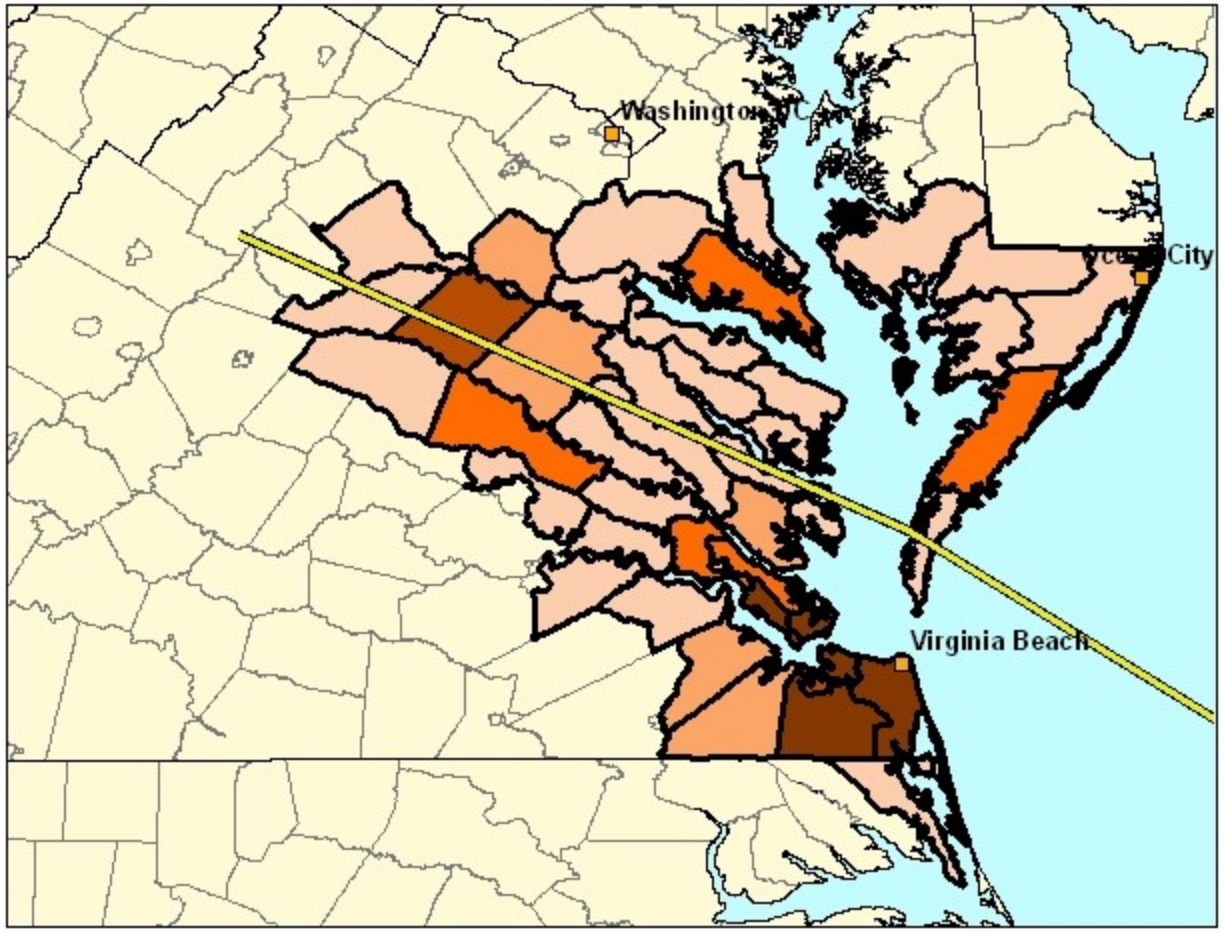
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Bret 1981 Households Model

Landfall Plus About 12 Hours

For Official Use Only!



Post Landfall Households Model Results

Virginia - 764,000
Maryland - 33,000

Model results per County on following page

This model is based on a Category 3 storm making landfall near coastal Virginia.

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 3 storm making landfall near coastal Virginia. These projections are based on information from the NHC (0930 EDT 09/16/2007) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Households Model	
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Sources: HURREVAC LRL-DEBRIS	Page 6 of 13

US Army Corps of Engineers

Hurricane Bret 1981 Households Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Households per State	County	Households per County
Maryland		Calvert	< 1,000
		Charles	< 1,000
		Dorchester	< 1,000
		Somerset	7,000
		St Marys	23,000
		Wicomico	< 1,000
		Worcester	3,000
Maryland	33,000		
North Carolina		Currituck	< 1,000
North Carolina			
Virginia		Accomack	16,000
		Caroline	10,000
		Charles City	3,000
		Chesapeake	75,000
		Culpeper	< 1,000
		Essex	5,000
		Fredericksburg	9,000
		Gloucester	15,000
		Hampton City	54,000
		Hanover	23,000
		Henrico	4,000
		Isle Of Wight	9,000
		James City	24,000
		King And Queen	3,000
		King George	7,000
		King William	6,000
		Lancaster	5,000
		Louisa	2,000
		Mathews	4,000

State	Households per State	County	Households per County
Virginia		Middlesex	5,000
(continued)		New Kent	7,000
		Newport News	69,000
		Norfolk City	85,000
		Northampton	6,000
		Northumberland	6,000
		Orange	4,000
		Poquoson City	5,000
		Portsmouth	39,000
		Prince George	< 1,000
		Richmond	4,000
		Spotsylvania	42,000
		Stafford	13,000
		Suffolk City	10,000
		Surry	2,000
		Virginia Beach	159,000
		Westmoreland	8,000
		Williamsburg	4,000
		York	22,000
Virginia	764,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Households Model

Generated By:
Siemsen, LRL 1000 EDT 09/16/2007

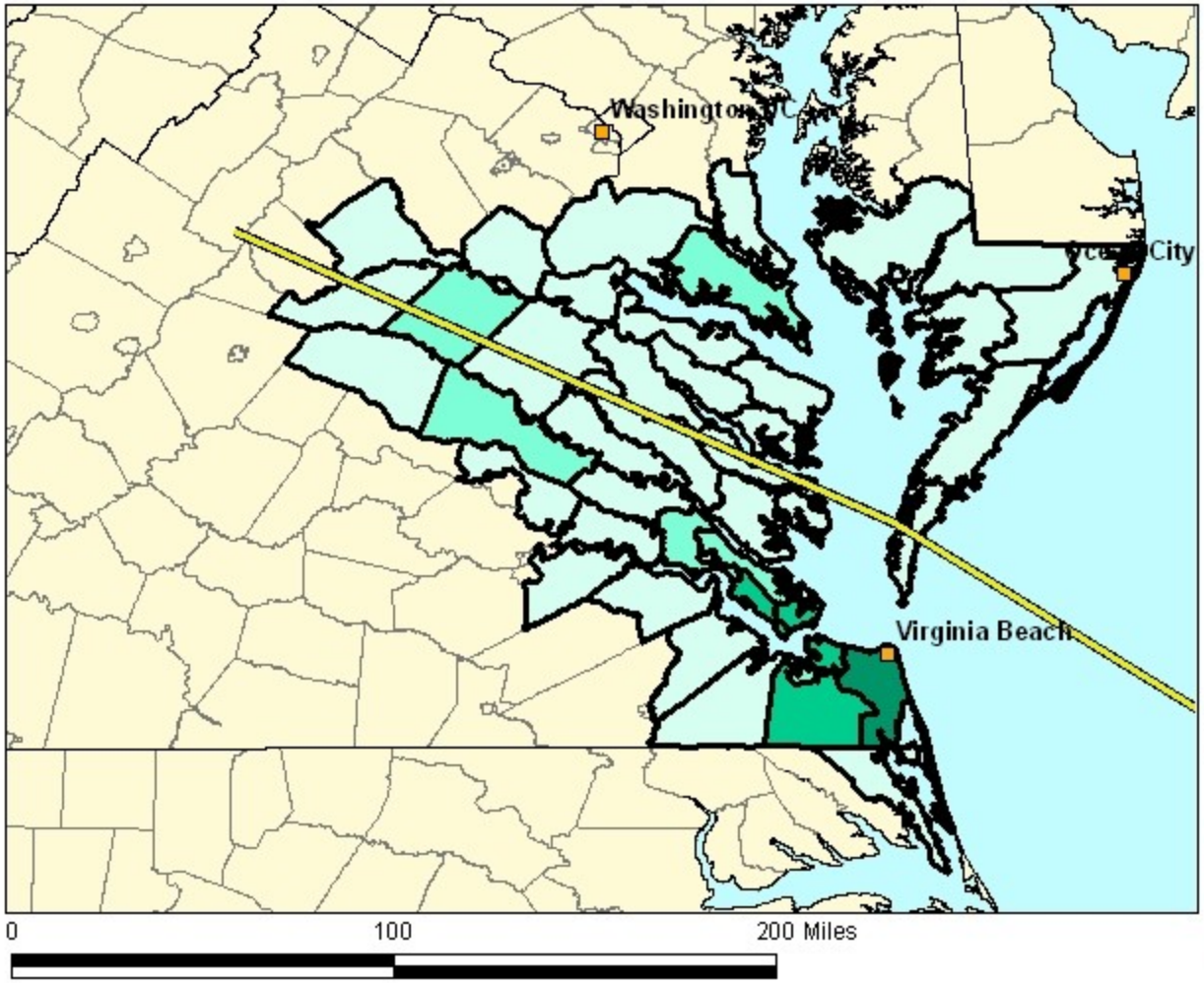
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Bret 1981 Commodities Model

Landfall Plus About **12** Hours

For Official Use Only!



Post Landfall Ice/Water Model Results

Day One / Day Two / Day Three
VA – 45/90/181 Truckloads
MD – 3/6/12 Truckloads
NC – 1/1/1 Truckloads

Model results per County on following page

This model is based on a Category 3 storm making landfall near coastal Virginia.

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 3 storm making landfall near coastal Virginia. These projections are based on information from the NHC ***(0930 EDT 09/16/2007)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Commodities Model	
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Sources: HURREVAC LRL-DEBRIS	Page 8 of 13

US Army Corps of Engineers

Hurricane Bret 1981 Commodities Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Truckloads per State	County	Truckloads per County
Maryland		Calvert	1
		Charles	1
		Dorchester	1
		Somerset	2
		St Marys	5
		Wicomico	1
		Worcester	1
Maryland	12		
North Carolina		Currituck	1
North Carolina	1		
Virginia		Accomack	4
		Caroline	3
		Charles City	1
		Chesapeake	17
		Culpeper	1
		Essex	1
		Fredericksburg	2
		Gloucester	4
		Hampton City	12
		Hanover	6
		Henrico	1
		Isle Of Wight	2
		James City	5
		King And Queen	1
		King George	2
		King William	2
		Lancaster	1
		Louisa	1
		Mathews	1

State	Truckloads per State	County	Truckloads per County
Virginia		Middlesex	1
(continued)		New Kent	2
		Newport News	15
		Norfolk City	19
		Northampton	2
		Northumberland	2
		Orange	1
		Poquoson City	1
		Portsmouth	9
		Prince George	1
		Richmond	1
		Spotsylvania	10
		Stafford	3
		Suffolk City	3
		Surry	1
		Virginia Beach	35
		Westmoreland	2
		Williamsburg	1
		York	5
Virginia	181		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Commodities Model

Generated By:
Siemsen, LRL 1000 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Bret 1981 Temp Housing Model

Landfall Plus About 12 Hours

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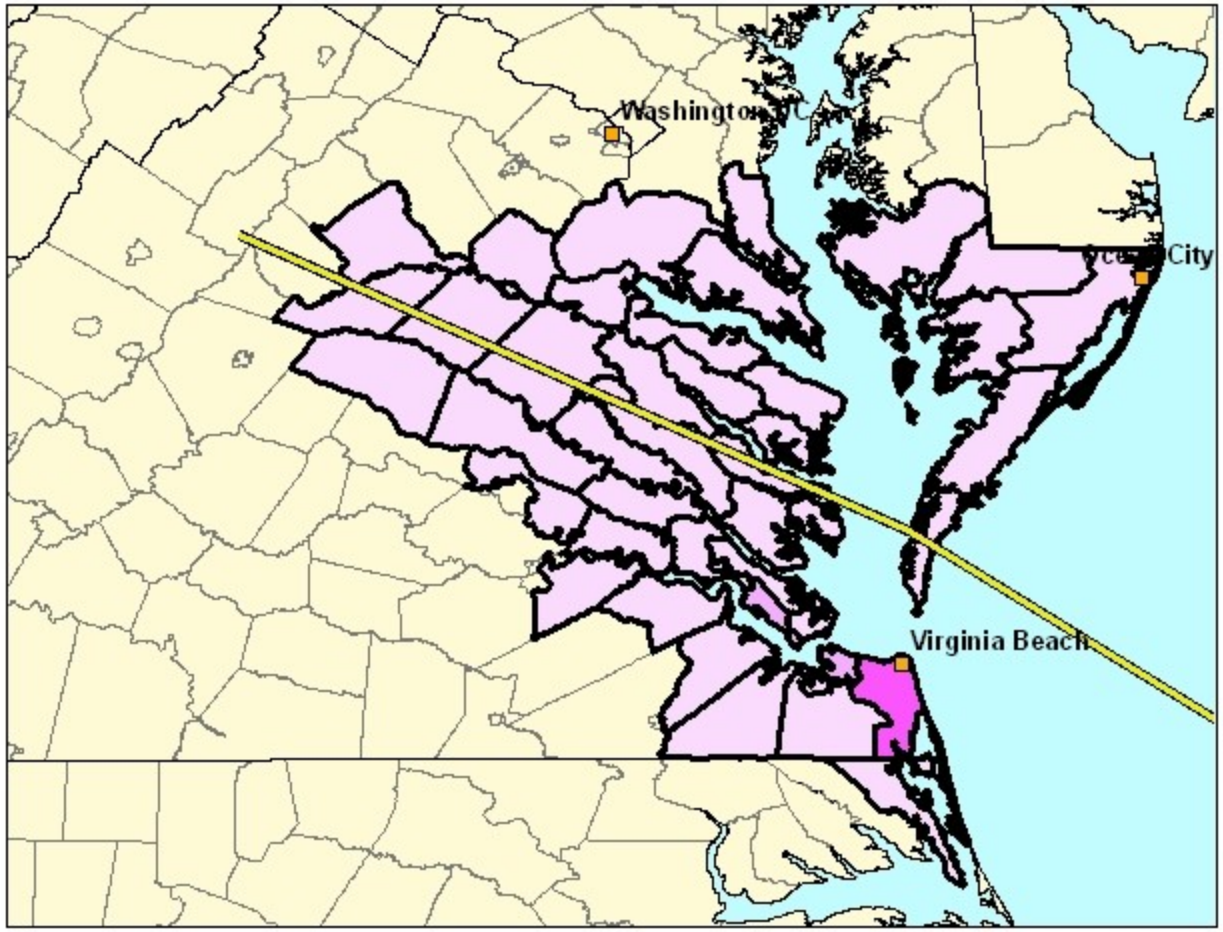

Post Landfall Temporary Housing Model Results

Virginia - 18,600
Maryland - 500

Model results per County on following page

This model is based on a Category 3 storm making landfall near coastal Virginia.

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near coastal Virginia. These projections are based on information from the NHC (0930 EDT 09/16/2007) forecast. Temporary housing is based on 1% in CAT 1, 3% in CAT 2 and 5% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Housing Model	
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US Army Corps of Engineers

Hurricane Bret 1981 Temp Housing Model

Landfall Plus About 12 Hours

For Official Use Only!

State	House Units per State	County	House Units per County
Maryland		Calvert	< 100
		Charles	< 100
		Dorchester	< 100
		Somerset	200
		St Marys	300
		Wicomico	< 100
		Worcester	< 100
Maryland	500		
North Carolina		Currituck	< 100
North Carolina			
Virginia		Accomack	500
		Caroline	300
		Charles City	< 100
		Chesapeake	800
		Culpeper	< 100
		Essex	200
		Fredericksburg	< 100
		Gloucester	600
		Hampton City	1,700
		Hanover	300
		Henrico	< 100
		Isle Of Wight	< 100
		James City	700
		King And Queen	200
		King George	< 100
		King William	200
		Lancaster	300
		Louisa	< 100
		Mathews	200

State	House Units per State	County	House Units per County
Virginia		Middlesex	300
(continued)		New Kent	200
		Newport News	2,100
		Norfolk City	2,500
		Northampton	300
		Northumberland	200
		Orange	< 100
		Poquoson City	200
		Portsmouth	500
		Prince George	< 100
		Richmond	100
		Spotsylvania	600
		Stafford	200
		Suffolk City	< 100
		Surry	< 100
		Virginia Beach	4,300
		Westmoreland	200
		Williamsburg	200
		York	700
Virginia	18,600		

Temporary housing is based on 1% in CAT 1, 3% in CAT 2 and 5% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Housing Model

Generated By:
Siemsen, LRL 1000 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Bret 1981 Temp Roofing Model

Landfall Plus About 12 Hours

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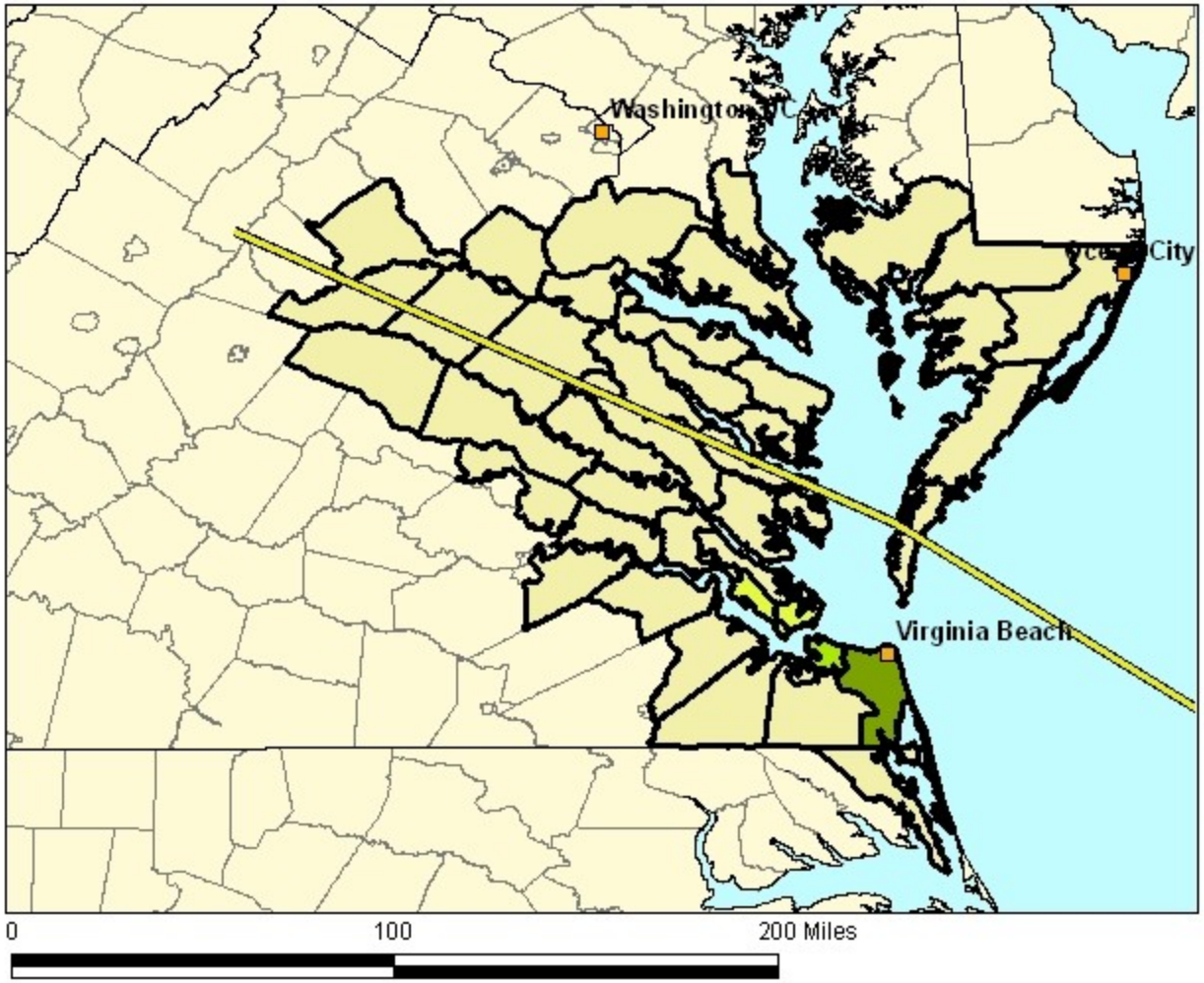

Post Landfall Temporary Roofing Model Results

Virginia - 31,500
Maryland - 800

Model results per County on following page

This model is based on a Category 3 storm making landfall near coastal Virginia.

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near coastal Virginia. These projections are based on information from the NHC (0930 EDT 09/16/2007) forecast. Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 8% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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US Army Corps of Engineers

Hurricane Bret 1981 Temp Roofing Model

Landfall Plus About 12 Hours

For Official Use Only!

State	House Units per State	County	House Units per County
Maryland		Calvert	< 100
		Charles	< 100
		Dorchester	< 100
		Somerset	300
		St Marys	500
		Wicomico	< 100
		Worcester	< 100
Maryland	800		
North Carolina		Currituck	< 100
North Carolina			
Virginia		Accomack	900
		Caroline	400
		Charles City	< 100
		Chesapeake	1,600
		Culpeper	< 100
		Essex	300
		Fredericksburg	200
		Gloucester	900
		Hampton City	2,700
		Hanover	500
		Henrico	< 100
		Isle Of Wight	200
		James City	1,200
		King And Queen	200
		King George	200
		King William	300
		Lancaster	400
		Louisa	< 100
		Mathews	400

State	House Units per State	County	House Units per County
Virginia		Middlesex	400
(continued)		New Kent	300
		Newport News	3,500
		Norfolk City	4,200
		Northampton	500
		Northumberland	400
		Orange	< 100
		Poquoson City	300
		Portsmouth	900
		Prince George	< 100
		Richmond	200
		Spotsylvania	1,000
		Stafford	300
		Suffolk City	200
		Surry	< 100
		Virginia Beach	7,300
		Westmoreland	300
		Williamsburg	200
		York	1,100
Virginia	31,500		

Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 8% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Bret 1981 Roofing Model

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Siemsen, LRL 1000 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS